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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,090	07/21/2003	Shawn E. Edmondson	6186.4-1-1	6007

23559 7590 04/03/2006

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EXAMINER	
CHANG, JUNGWON	
ART UNIT	**PAPER NUMBER**
2154	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,090	EDMONDSON, SHAWN E.	
	Examiner	Art Unit	
	Jungwon Chang	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-14,16-22 and 25-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-14,16-22 and 25-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

FINAL ACTION

1. This office action is responsive to amendment filed on 12/27/2005. Claims 4, 15, 23 and 24 have been canceled, and claim 44 is added. Claims 1-3, 5-14, 16-22 and 25-44 are presented for examination.

2. The objection to Claims 27 and 38 is withdrawn in view of amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 25-33 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fichou et al. (US 6,072,773), hereinafter Fichou, in view of Abdelilah et al. (US 6,940,864), hereinafter Abdelilah.

4. As to claims 25 and 41, Fichou discloses the invention as claimed, including a programmable device storing instructions that, when read by the programmable device, cause the programmable device to perform a method (col. 28, lines 24-49) comprising:

generating from one or more traffic descriptors (col. 3, line 36 – col. 4, line 27) non-Boolean configuration information for a network element (400, 401, fig. 4; reserving

bandwidth; col. 4, lines 41-64; col. 6, line 31 – col. 7, line 58; col. 14, line 66 – col. 15, line 1), the one or more traffic descriptors describing packetized traffic to be transmitted over a packet network using at least in part Boolean expressions on primitive network predicates (402, 500, 600, fig. 4; figs. 5-11; abstract; col. 1, line 65 – col. 2, line 5; col. 15, lines 3-7; col. 15, line 57 – col. 16, lien 35; col. 16, line 50 – col. 17, line 7);

causing configuration of the network element using the non-Boolean, configuration information (col. 2, line 7-52; col. 3, lines 20-30; col. 4, lines 41-64; col. 8, lines 14-30).

5. Fichou disclose traffic flow according to traffic parameters (col. 5, lines 29-67). However, Fichou does not specifically disclose the primitive network predicates identifying the traffic. Abdelilah discloses the primitive network predicates identifying the traffic (col. 1, lines 36-50; col. 6, line 54 – col. 7, line 46; col. 10, lines 34-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fichou and Abdelilah because Abdelilah's identifying the traffic would optimize the handling of communication traffic by analyzing the characteristics of data packets (col. 1, lines 48-67).

6. As to claim 26, Fichou discloses wherein the primitive network predicates include one or more of the following: transmission protocol, source address, destination address, source ports, destination ports, precedence value and type of service (packet header inherently has a routing information, such as protocol information, source IP

address, destination IP address, source port number, destination port number, quality of service; col. 1, lines 57-63; col. 6, lines 14-30).

7. As to claim 27, it is rejected for the same reasons set forth in claim 25 above. In addition, Fichou discloses converting an application *parameter* to the one ore more traffic descriptors, the application *parameter* including a quality of service treatment for packets originated by an application (col. 7, lines 3-7).

8. As to claim 28, it is rejected for the same reasons set forth in claim 25 above. In addition, Fichou discloses wherein the application *parameter* is received from a customer running the application, the customer transmitting traffic from the application to an edge device on a network, of which the network element is a part (col. 5, lines 29-52, "end-to-end").

9. As to claim 29, it is rejected for the same reasons set forth in claim 25 above. In addition, Fichou discloses generating for each of a plurality of application *policy* one or more traffic descriptor and combining the one or more traffic descriptors of each application into merged traffic descriptors, from which the configuration information is generated; at least one combination rule specifying that network traffic that meets all of a plurality of criteria be accepted (col. 4, lines 16-27; col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42).

10. As to claim 30, Fichou discloses the plurality of applications are associated with a single service plan on a network, to which the network element belongs (col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42).

11. As to claims 31-33, Fichou discloses the configuration information includes an access list (col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42).

12. As to claim 40, it is rejected for the same reasons set forth in claim 41 above. In addition, Fichou discloses transmission protocol, source address, destination address, source ports, destination ports, precedence value and type of service (packet header inherently has a routing information, such as protocol information, source IP address, destination IP address, source port number, destination port number, quality of service; col. 1, lines 33-40; col. 6, lines 14-30).

13. As to claim 42, it is rejected for the same reasons set forth in claim 41 above. In addition, Fichou discloses transmission protocol, source address, destination address, source ports, destination ports, precedence value and type of service (packet header inherently has a routing information, such as protocol information, source IP address, destination IP address, source port number, destination port number, quality of service; col. 1, lines 57-63; col. 6, lines 14-30).

14. As to claim 43, it is rejected for the same reasons set forth in claim 41 above. In

addition, Fichou discloses converting an application *parameter* to the one ore more traffic descriptors, the application *parameter* including a quality of service treatment for packets originated by an application (col. 7, lines 3-7).

15. Claims 2, 3, 5-14, 16-22, 34-39 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fichou, in view of Abdelilah and Wang et al. (US 6,636,505).

16. As to claim 34, Fichou discloses the invention as claimed, including a method for generating configuration information, comprising:

generating one or more traffic descriptors (col. 3, line 36 – col. 4, line 27), the one or more traffic descriptors describing packet using at least in part Boolean expressions on primitive network predicates (402, 500, 600, fig. 4; figs. 5-11; abstract; col. 1, line 65 – col. 2, line 5; col. 15, lines 3-7; col. 15, line 57 – col. 16, line 35; col. 16, line 50 – col. 17, line 7);

causing configuration of the network element using the non-Boolean, configuration information (col. 2, line 7-52; col. 3, lines 20-30; col. 4, lines 41-64; col. 8, lines 14-30).

17. Fichou disclose traffic flow according to traffic parameters (col. 5, lines 29-67). However, Fichou does not specifically disclose the primitive network predicates identifying the traffic. Abdelilah discloses the primitive network predicates identifying the traffic (col. 1, lines 36-50; col. 6, line 54 – col. 7, line 46; col. 10, lines 34-64). It would

have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fichou and Abdelilah because Abdelilah's identifying the traffic would optimize the handling of communication traffic by analyzing the characteristics of data packets (col. 1, lines 48-67).

Fichou discloses generating one or more traffic descriptors (col. 3, line 36 – col. 4, line 27), the one or more traffic descriptors describing packetized traffic to be transmitted over a packet network (402, 500, 600, fig. 4; figs. 5-11; abstract; col. 1, line 65 – col. 2, line 5; col. 15, lines 3-7; col. 15, line 57 – col. 16, lien 35; col. 16, line 50 – col. 17, line 7); and traffic policies (traffic policy that inherently include a high-level description; col. 4, lines 41-64; col. 9, lines 18-52). However, Fichou does not specifically disclose application profile containing a high-level description of treatment of packets originating from the application for transmission over a network. Wang discloses disclose application profile containing a high-level description of treatment of packets originating from the application for transmission over a network (col. 8, line 64 – col. 9, line 2; col. 9, lines 22-55; col. 11, lines 37-67; col. 28, line 66 – col. 29, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fichou and Wang because Wang's application profile would improve the quality of service by routing the packet with best path which optimizes a cost of the network.

18. As to claims 35 and 39, they are rejected for the same reasons set forth in claim

34 above. In addition, Fichou discloses generating for each of a plurality of application *policy* one or more traffic descriptor and combining the one or more traffic descriptors of each application into merged traffic descriptors, from which the configuration information is generated; at least one combination rule specifying that network traffic that meets all of a plurality of criteria be accepted (col. 4, lines 16-27; col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42).

19. As to claims 36-38, Fichou discloses the configuration information includes an access list (col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42).

20. As to claim 44, Fichou discloses the invention substantially as claimed, including a method comprising:

receiving a *policy* specifying a quality of service (QoS) treatment for packets for at least one application in one or more packet networks (col. 4, lines 41-64; col. 9, lines 18-32; col. 23, line 56 – col. 24, line 29);

automatically generating at least one traffic descriptor for said application based at least in part on said *policy* (col. 2, lines 7-52; col. 3, line 36 – col. 4, lines 27), the traffic descriptor being comprised of a Boolean expression of primitive network predicates (402, 500, 600, fig. 4; figs. 5-11; abstract; col. 1, line 65 – col. 2, line 5; col. 15, lines 3-7; col. 15, line 57 – col. 16, line 35; col. 16, line 50 – col. 17, line 7); and

automatically generating configuration information for one or more network elements of said one or more packet networks for treatment of the packets for the at least one application according to the at least one traffic descriptor (col. 2, line 7-52;

col. 3, line 36 – col. 4, line 27; col. 5, lines 1-4; col. 8, lines 14-30 col. 9, lines 18-32).

21. Fichou disclose traffic flow according to traffic parameters (col. 5, lines 29-67). However, Fichou does not specifically disclose the primitive network predicates identifying the traffic. Abdelilah discloses the primitive network predicates identifying the traffic (col. 1, lines 36-50; col. 6, line 54 – col. 7, line 46; col. 10, lines 34-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fichou and Abdelilah because Abdelilah's identifying the traffic would optimize the handling of communication traffic by analyzing the characteristics of data packets (col. 1, lines 48-67).

Fichou discloses a policy (col. 4, lines 41-64; col. 9, lines 18-32). However, Fichou does not specifically use a term "profile". Wang discloses disclose a profile (col. 8, line 64 – col. 9, line 2; col. 9, lines 22-55; col. 11, lines 37-67; col. 28, line 66 – col. 29, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fichou and Wang because Wang's profile would improve the quality of service by routing the packet with best path, which optimizes a cost of the network.

22. As to claims 2 and 3, Fichou discloses updating a configuration of said one or more network elements based at least in part on said configuration information (col. 12, lines 20-60).

23. As to claim 5, Fichou discloses the configuration information includes at least one generic access list automatically generated based at least in part on said at least one traffic descriptor (col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42).

24. As to claims 6, 7 and 9-11, Fichou discloses the configuration information includes an access list (col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42) comprising: at least one clause comprising one or more network criteria; and

at least one match rule specifying whether said one or more packets matching said one or more network criteria are to be permitted or denied (col. 4, lines 16-27; col. 9, lines 5-17).

25. As to claim 8, Fichou discloses network criteria is selected from the group consisting of protocol, source address, destination address, source ports, destination ports, precedence value and type of service (packet header inherently has a routing information, such as protocol information, source IP address, destination IP address, source port number, destination port number, quality of service; col. 1, lines 57-63; col. 6, lines 14-30; col. 4, lines 16-27; col. 12, lines 20-60).

26. As to claims 12-14, Fichou discloses service plane selection is selected from the group consisting of a normal service plane, a low priority data service plane, a medium

priority data service plane, a high priority data service plane, a reserved bandwidth service plane, a video service plane, and a voice service plane (col. 1, liens 26-63; col. 3, line 36 – col. 4, line 27).

27. As to claims 16-21, they are rejected for the same rejection set forth in claim 44 above. In addition, Fichou discloses wherein said policy comprises at least one combination rule; at least one combination rule specifying that network traffic that meets all of a plurality of criteria be accepted (col. 4, lines 16-27; col. 8, lines 1-30; col. 4, lines 41-64; col. 9, lines 18-67; col. 10, lines 1-42).

28. As to claim 22, Fichou discloses network criteria is selected from the group consisting of protocol, source address, destination address, source ports, destination ports, precedence value and type of service (packet header inherently has a routing information, such as protocol information, source IP address, destination IP address, source port number, destination port number, quality of service; col. 1, lines 57-63; col. 6, lines 14-30; col. 4, lines 16-27; col. 12, lines 20-60).

Response to Arguments

29. Applicant's arguments with respect to claims 1-3, 5-14, 16-22 and 25-44 have been considered but are moot in view of the new ground(s) of rejection.

30. In the remarks, applicants argued in substance that:

(1) Applicant asserts on page 9 of the remarks that the "traffic descriptor" used in the specification and claims of the present application does not pertain to ATM traffic and does not specify a quality of service treatment.

The examiner respectfully disagrees. In the specification and claims of present application, the traffic descriptor is used in a "packet network". The ATM network is well known as the packet network. Thus, the Examiner properly interprets that the ATM network of Fichou is the packet network of the present application, and Fichou explicitly discloses "traffic descriptor" (col. 6, line 31 – col. 7, line 55; col. 3, line 36 – col. 4, line 27).

(2) Applicant asserts on page 10 of the Remarks, claim 4 has been rewritten as claim 44, and independent claim 25, 34, and 41. Each of these claims has been revised to explain that the primitive network predicates are used to identify traffic.

Applicant's arguments with "primitive network predicates are used to identify traffic" have been considered but are moot in view of the new ground(s) of rejection.

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jungwon Chang whose telephone number is ~~(703)305-~~ 571-272-3964 ~~9669.~~ The examiner can normally be reached on 9:30-6:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 571-272-3964 ~~(703)305-8498~~. The fax phone number for the organization where this application or proceeding is assigned is ~~703-872-9306~~. 571-273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jungwon Chang
March 25, 2006

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